AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously amended) A method of optical wavelength allocation in a photonic network comprising the steps of:

generating a first plurality of unmodulated optical wavelengths at a first location in the network;

selecting a predetermined one wavelength of the first plurality of unmodulated optical wavelengths;

transmitting the predetermined one wavelength to a second location; and

generating a second plurality of unmodulated optical wavelengths at a second location in the network with reference to the predetermined one wavelength.

2. (Previously amended) A method as claimed in claim 1 further comprising the steps of:

forming a second group of wavelengths by grouping selected second wavelengths; and

transmitting the second group of wavelengths to a third location in the network.

3. (Previously amended) A method as claimed in claim 2 further comprising the steps of:

modulating one wavelength of the second group of wavelengths at the third location; and

passing the modulated one of the second group of wavelengths to the first location in the network.

4. (Previously amended) A method as claimed in claim 2 further comprising the steps of:

modulating one wavelength of the second group of wavelengths at the third location; and

passing the modulated one of the second group of wavelengths to a fourth location in the network.

5. (Original) A method as claimed in claim 2 further comprising the step of modulating a wavelength of the first group of wavelengths at the first location.

6. (Previously amended) Apparatus for optical wavelength allocation in a photonic network comprising:

means for generating a first plurality of unmodulated optical wavelengths at a first location in the network;

means for selecting a predetermined one wavelength of the first plurality of optical wavelengths;

means for transmitting the predetermined one wavelength to a second location for generating a second plurality of unmodulated optical wavelengths at a second location in the network with reference to the predetermined one wavelength.

7. (Previously amended) Apparatus as claimed in claim 6 further comprising:

means for forming a second group of wavelengths by grouping selected second wavelengths; and

means for transmitting the second group of wavelengths to a third location in the network.

8. (Previously amended) Apparatus as claimed in claim 7 further comprising:

means for modulating one wavelength of the second group of wavelengths at the third location; and

means for passing the modulated one of the second group of wavelengths to the first location in the network.

9. (Original) Apparatus as claimed in claim 7 further comprising means for modulating one wavelength of the second group of wavelengths at the third location and passing the modulated one of the second group of wavelengths to a fourth location in the network.

10. (Currently amended) A method of optical wavelength allocation in a photonic network comprising the steps of:

generating a first plurality of unmodulated optical wavelengths at a first location in the network; [and]

generating a second plurality of unmodulated optical wavelengths at a second location in the network[.]; and

in response to a path request from a third location, selecting one location adjacent to the third location from the first location and the second location; and

setting up a connection between the third location and the one location to provide the optical wavelengths generated at the one location to the third location.

11. (Currently Amended) A method as claimed in claim 10 further comprising the steps of:

forming a [second] group of wavelengths by grouping [selected second] wavelengths selected from the unmodulated optical wavelengths; and

transmitting the [second] group of wavelengths to a third location in the network.

12. (Currently Amended) A method as claimed in claim 11 further comprising the steps of:

modulating one wavelength of the [second] group of wavelengths at the third location; and

passing the modulated one of the [second] group of wavelengths to the first location in the network.

13. (Currently Amended) A method as claimed in claim 11 further comprising the steps of:

modulating one wavelength of the [second] group of wavelengths at the third location; and

passing the modulated one of the [second] group of wavelengths to a fourth location in the network.

14. (Currently amended) A method as claimed in claim 11 further comprising the step of modulating a wavelength of [the] a first group of wavelengths selected from the first plurality of unmodulated optical wavelengths at the first location.

15. (Currently amended) Apparatus for optical wavelength allocation in a photonic network comprising:

means for generating a first plurality of unmodulated optical wavelengths at a first location in the network; [and]

means for generating a second plurality of unmodulated optical wavelengths at a second location in the network [.]; and

means for selecting one location adjacent to a third location from the first location and the second location in response to a path request from a third location, and setting up a connection between the third location and the one location to provide the optical wavelengths generated at the one location to the third location.

16. (Currently amended) Apparatus as claimed in claim 15 further comprising:

means for forming a [second] group of wavelengths by grouping [selected second] wavelengths selected from the unmodulated optical wavelengths; and

means for transmitting the [second] group of wavelengths to a third location in the network.

17. (Currently Amended) Apparatus as claimed in claim 16 further comprising:

means for modulating one wavelength of the [second] group of wavelengths at the third location; and

means for passing the modulated one of the [second] group of wavelengths to the first location in the network.

18. (Currently amended) Apparatus as claimed in claim 16 further comprising modulating one wavelength of the [second] group of wavelengths at the third location and passing the modulated one of the [second] group of wavelengths to a fourth location in the network.

19. (Currently amended) Apparatus as claimed in claim 16 further comprising means for modulating a wavelength of [the] a first group of wavelengths selected from the first plurality of unmodulcated optical wavelengths at the first location.

20. (Currently Amended) A method of optical wavelength allocation in a photonic network comprising the steps of:

generating a plurality of unmodulated optical wavelengths at a first location in the network;

forming a group of wavelengths by grouping selected wavelengths;

transmitting the group of wavelengths to a second location in the network;

modulating one of the group of wavelengths at the second location; [and]

passing the group of wavelengths to a third location in the network[.];

modulating a second of the group of wavelengths at the third location; and

passing the modulated second of the group of wavelengths back to the second location thereby establishing a two way communications path using two optical wavelengths between the second and third locations.

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Currently Amended) Apparatus for optical wavelength allocation in a photonic network comprising:

means for generating a plurality of unmodulated optical wavelengths at a first location in the network;

means for forming a group of wavelengths by grouping selected wavelengths;

means for transmitting the group of wavelengths to a second location in the network;

means for modulating one of the group of wavelengths at the second location;

means for passing the group of wavelengths to a third location in the network[.];

means for modulating a second of the group of wavelengths at the third location; and

means for passing the modulated second of the group of wavelengths back to the second location whereby a two way communications path using two optical wavelengths between the second and third locations is established.

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Original) Apparatus as claimed in claim 24 wherein the means for generating a plurality of optical wavelength includes a multiple lambda source

29. (Original) Apparatus as claimed in claim 28 wherein the optical wavelengths conform to a dense wavelength distributed multiplexing scheme.

30. (Original) Apparatus as claimed in claim 24 wherein the means for generating a plurality of optical wavelengths includes wavelength distributed multiplexers.

31. (Previously Amended) Apparatus as claimed in claim 30 wherein the wavelength distributed multiplexers are coarse relative to a dense wavelength distributed multiplexing scheme.

32. (New) Apparatus as claimed in claim 6 wherein the generating means includes a multiple lambda source

33. (New) Apparatus as claimed in claim 32 wherein the optical wavelengths conform to a dense wavelength distributed multiplexing scheme.

34. (New) Apparatus as claimed in claim 6 wherein the generating means includes wavelength distributed multiplexers.

35. (New) Apparatus as claimed in claim 34 wherein the wavelength distributed multiplexers are coarse relative to a dense wavelength distributed multiplexing scheme.

36. (New) A method as claimed in claim 10 further comprising the step of:

generating a reference wavelength;

providing the reference wavelength to the first location to generate the first plurality of unmodulated optical wavelengths at the first location; and

providing the reference wavelength to the second location to generate the second plurality of unmodulated optical wavelengths at the second location.

37. (New) A method as claimed in claim 10 further comprising the step of:

selecting a reference wavelength from the first plurality of unmodulated optical wavelengths;

providing the reference wavelength to the second location to generate the second plurality of unmodulated optical wavelengths at the second location.

38. (New) Apparatus as claimed in claim 15 further comprising:

a source for generating a reference wavelength;

means for providing the reference wavelength to the first location to generate the first plurality of unmodulated optical wavelengths at the first location; and

means for providing the reference wavelength to the second location to generate the second plurality of unmodulated optical wavelengths at the second location.

39. (New) Apparatus as claimed in claim 15 further comprising:

means for selecting a reference wavelength from the first plurality of unmodulated optical wavelengths;

means for providing the reference wavelength to the second location to generate the second plurality of unmodulated optical wavelengths at the second location.

40. (New) Apparatus as claimed in claim 15 wherein the generating means includes a multiple lambda source

41. (New) Apparatus as claimed in claim 40 wherein the optical wavelengths conform to a dense wavelength distributed multiplexing scheme.

42. (New) Apparatus as claimed in claim 15 wherein the generating means includes wavelength distributed multiplexers.

43. (New) Apparatus as claimed in claim 42 wherein the wavelength distributed multiplexers are coarse relative to a dense wavelength distributed multiplexing scheme.